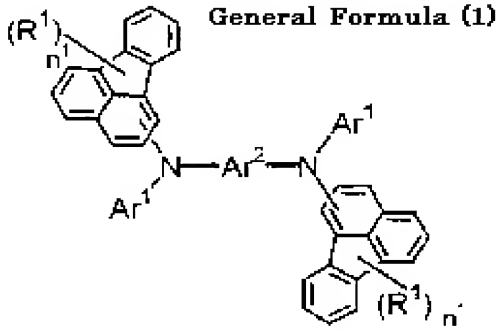
CLAIMS

1. An organic light-emitting material characterized in that the material is used in a light emitting layer in a green light emitting element and represented by the following general formula (1):



wherein:

n^1 is an integer of 0 to 3;

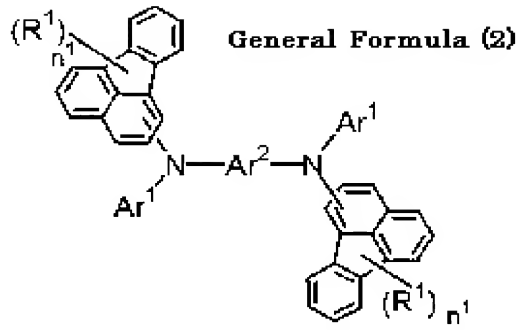
R^1 is an alkyl group having 10 carbon atoms or less;

Ar^1 is a monovalent group which is derived from monocyclic or fused-ring aromatic hydrocarbon having 20 carbon atoms or less, and which optionally has a substituent having 10 carbon atoms or less; and

Ar^2 is a divalent group which is derived from a ring assembly having 30 carbon atoms or less and being comprised of monocyclic or fused-ring aromatic hydrocarbon having 1 to 3 rings, and which optionally has a substituent having 4 carbon atoms or less.

2. The organic light-emitting material according to claim 1, characterized in that, in the general formula (1) above, Ar^1 is an unsubstituted phenyl group, n^1 is 0, and Ar^2 is a divalent group derived from unsubstituted biphenyl.

3. An organic light-emitting material represented by the following general formula (2):



wherein:

n^1 is an integer of 0 to 3;

R^1 is an alkyl group having 10 carbon atoms or less;

Ar^1 is a monovalent group which is derived from monocyclic or fused-ring aromatic hydrocarbon having 20 carbon atoms or less, and which optionally has a substituent having 10 carbon atoms or less; and

Ar^2 is a divalent group which is derived from a ring assembly having 30 carbon atoms or less and being comprised of monocyclic or fused-ring aromatic hydrocarbon having 1 to 3 rings, and which optionally has a substituent having 4 carbon atoms or less,

with the proviso that the case where said monovalent group is an unsubstituted phenyl group, said divalent group is a divalent group derived from unsubstituted biphenyl, and each of two fluoranthenes is bonded to nitrogen at the carbon numbered 3 is excluded.

4. The organic light-emitting material according to claim 3, characterized in that the organic light-emitting material represented by the general formula (2) above is a light emitting material used in a light emitting layer in a green light emitting organic element.

5. The organic light-emitting material according to claim 3, characterized in that the ring assembly constituting Ar^2 in the general formula (2) above is biphenyl,

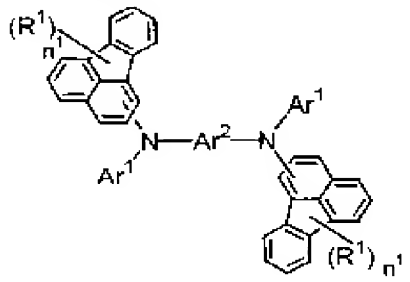
binaphthyl, or bianthracenyl.

6. The organic light-emitting material according to claim 3, characterized in that the monovalent group, which is derived from monocyclic or fused-ring aromatic hydrocarbon, constituting Ar^1 in the general formula (2) above has a substituent having 10 carbon atoms or less.

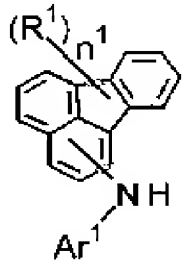
7. The organic light-emitting material according to claim 6, characterized in that said substituent having 10 carbon atoms or less is an alkyl group selected from a methyl group, an ethyl group, an i-propyl group, and a t-butyl group, or a phenyl group.

8. A method for producing an organic material represented by the general formula (3) below, characterized by reacting a compound represented by the general formula (4)-1 below with a compound represented by the general formula (4)-2 below using a metal catalyst:

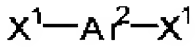
General Formula (3)



General Formula (4)-1



General Formula (4)-2



wherein:

in the general formula (3) and general formula (4)-1 above,

n^1 is an integer of 0 to 3;

R^1 is an alkyl group having 10 carbon atoms or less; and

Ar^1 is a monovalent group which is derived from monocyclic or fused-ring aromatic hydrocarbon having 20 carbon atoms or less, and which

optionally has a substituent having 10 carbon atoms or less;

in the general formula (3) and general formula (4)-2 above,

Ar^2 is a divalent group which is derived from a ring assembly having 30 carbon atoms or less and being comprised of monocyclic or fused-ring aromatic hydrocarbon having 1 to 3 rings, and which optionally has a substituent having 4 carbon atoms or less; and

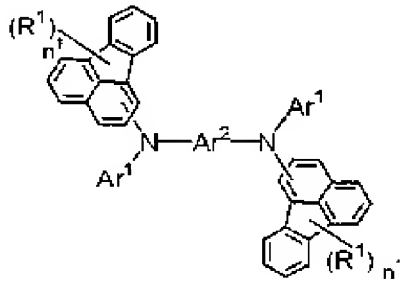
in the general formula (4)-2 above,

X^1 is a halogen atom or a perfluoroalkanesulfonic ester group.

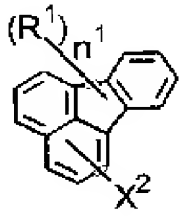
9. The method for producing an organic material according to claim 8, characterized in that the ring assembly constituting Ar^2 in the general formula (4)-2 above is biphenyl, binaphthyl, or bianthracenyl.

10. A method for producing an organic material represented by the general formula (3) below, characterized by reacting a compound represented by the general formula (5)-1 below with a compound represented by the general formula (5)-2 below using a metal catalyst:

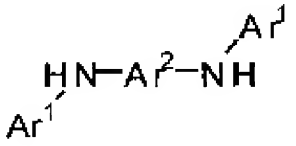
General Formula (3)



General Formula (5)-1



General Formula (5)-2



wherein:

in the general formula (3) and general formula (5)-1 above,

n^1 is an integer of 0 to 3, and

R^1 is an alkyl group having 10 carbon atoms or less;

in the general formula (5)-1 above,

X^2 is a halogen atom or a perfluoroalkanesulfonic ester group; and

in the general formula (3) and general formula (5)-2 above,

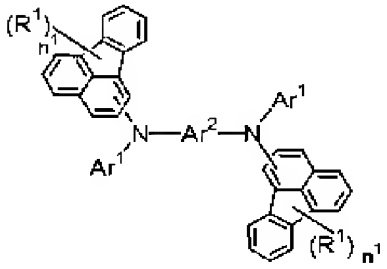
Ar^1 is a monovalent group which is derived from monocyclic or fused-ring aromatic hydrocarbon having 20 carbon atoms or less, and which optionally has a substituent having 10 carbon atoms or less, and

Ar^2 is a divalent group which is derived from a ring assembly having 30 carbon atoms or less and being comprised of monocyclic or fused-ring aromatic hydrocarbon having 1 to 3 rings, and which optionally has a substituent having 4 carbon atoms or less.

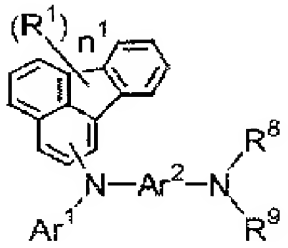
11. The method for producing an organic material according to claim 10, characterized in that the ring assembly constituting Ar^2 in the general formula (5)-2 above is biphenyl, binaphthyl, or bianthracenyl.

12. A method for producing an organic material represented by the general formula (3) below, characterized by reacting a compound represented by the general formula (6)-1 below with a compound represented by the general formula (6)-2 below using a metal catalyst:

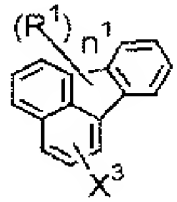
General Formula (3)



General Formula (6)-1



General Formula (6)-2



wherein:

in the general formula (3) and general formulae (6)-1 and (6)-2 above,

n^1 is an integer of 0 to 3, and

R^1 is an alkyl group having 10 carbon atoms or less;

in the general formula (3) and general formula (6)-1 above,

Ar^1 is a monovalent group which is derived from monocyclic or fused-ring aromatic hydrocarbon having 20 carbon atoms or less, and which optionally has a substituent having 10 carbon atoms or less, and

Ar^2 is a divalent group which is derived from a ring assembly having 30 carbon atoms or less and being comprised of monocyclic or fused-ring aromatic hydrocarbon having 1 to 3 rings, and which optionally has a substituent having 4 carbon atoms or less;

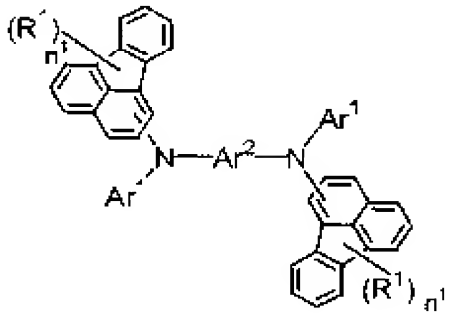
in the general formula (6)-1 above, R^8 is a hydrogen atom or Ar^1, and R^9 is a hydrogen atom; and

in the general formula (6)-2 above, X^3 is a halogen atom or a perfluoroalkanesulfonic ester group.

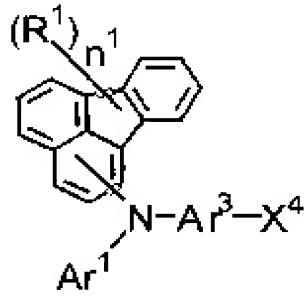
13. The method for producing an organic material according to claim 12, characterized in that the ring assembly constituting Ar^2 in the general formula (6)-1 above is biphenyl, binaphthyl, or bianthracenyl.

14. A method for producing an organic material represented by the general formula (3) below, characterized by reacting a compound represented by the general formula (7) below using an equivalent amount of a metal, a metal salt, or a metal catalyst:

General Formula (3)



General Formula (7)



wherein:

in the general formula (3) and general formula (7) above,

n^1 is an integer of 0 to 3,

R^1 is an alkyl group having 10 carbon atoms or less, and

Ar^1 is a monovalent group which is derived from monocyclic or fused-ring aromatic hydrocarbon having 20 carbon atoms or less, and which optionally has a substituent having 10 carbon atoms or less;

in the general formula (3) above,

Ar^2 is a divalent group which is derived from a ring assembly having 30 carbon atoms or less and being comprised of monocyclic or fused-ring aromatic hydrocarbon having 1 to 3 rings, and which optionally has a substituent having 4 carbon atoms or less; and

in the general formula (7) above,

Ar^3 is a divalent group which is derived from monocyclic or fused-ring aromatic hydrocarbon having 1 to 3 rings, and which optionally has a substituent having 4 carbon atoms or less, and

X^4 is a halogen atom or a perfluoroalkanesulfonic ester group.

15. The method for producing an organic material according to claim 14, characterized in that the compound represented by the general formula (7) above is reacted with a compound corresponding to the compound represented by the general formula (7) wherein X^4 is changed to magnesium halide, boric acid, or borate.

16. The method for producing an organic material according to claim 14, characterized in that, in the general formula (7) above, Ar^3 is a divalent group derived from benzene, naphthalene, or anthracene.